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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/653,336      | 08/31/2000  | Kenichi Takekawa     | 196124US2           | 4688             |

22850 7590 05/06/2004

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| EXAMINER |
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SHAPIRO, LEONID

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| ART UNIT | PAPER NUMBER |
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2673

DATE MAILED: 05/06/2004

22

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/653,336

Applicant(s)

TAKEKAWA ET AL.

Examiner

Leonid Shapiro

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-24 and 27-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-24 and 27-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, limitation of claims: the ...a **first** predetermined **threshold**... a **second threshold** value...” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 21-24 and 27-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitations of claims: the ...a **first** predetermined **threshold**... a **second threshold** value...” was not described in the originally filed specification. Originally filed specification shows one threshold, at first set relatively low (See page 16, Lines 1-12), then adjusted with distance (See Fig. 7B, item S19, page 19, 12-20).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 21-24 and 27-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-7 of U.S. Patent No. 6,594,023 B1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because "the threshold value being changed in accordance with distance between the pointer and the optical unit" as cited in claim 21 of proposed invention is equivalent to change of ratio calculating device, fixed threshold value, a comparing device and a determining device as in claims 6-7 of U.S. Patent No. 6,594,023 B1. It is also obvious that if "the threshold value being changed in accordance with distance between the pointer and the optical unit", then the highest level of threshold value enables detection of the pointer at a closest point from the optical unit and "a lowest level of threshold value enables detection of the pointer at a farthest point from the optical unit" as cited in last limitation of claim 21.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blue et al. (US Patent No. 5,196,835) in view of Resman (US Patent No. 6,459,424 B1).

As to claim 21, Blue et al. teaches a coordinate input-detecting apparatus including a touch panel to be touched by a pointer, coordinate input-detecting apparatus comprising: a substantially flat two-dimensional coordinate input-detecting area configured to receive insertion of the pointer, substantially flat two-dimensional coordinate input-detecting area being formed in front of the touch panel and having a prescribed depth (See Fig. 1-3, items 10, 20,22, in description See Col. 2, Lines 6-12, Col. 4, Lines 55-68, Col. 5, Lines 1-25 and Col. 6, Lines 42-48); an optical unit, configured optically detect the pointer inserted into the coordinate input detecting area and to generate a detection signal based on the detection; and a controller configured to calculate coordinates designated by the pointer in accordance with detection signal (See Fig. 1-3, items 10, 20,22, in description See Col. 2, lines 6-12, Col. 4, Lines 55-68, Col. 5, Lines 1-25 and Col. 6, Lines 42-48).

Blue et al. does not show optical unit recognizes insertion of the pointer when detection signal exceeds a first predetermined threshold value, detection allowing a coordinate calculation operation, second threshold value being changed in accordance with a distance between the

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pointer and the optical unit, and wherein a lowest level of second threshold value enables detection of the pointer at a farthest point from the optical unit.

Resman teaches to adjust threshold in accordance with a range (distance) between the pointer and the optical unit (See Fig. 2, items 22-24, Col. 7, Lines 46-64).

It is also common logic and understanding, that if the threshold value being changed in accordance with distance between the pointer and the optical unit, then the highest level of threshold value enables detection of the pointer at a closest point from the optical unit and a lowest level of threshold value enables detection of the pointer at a farthest point from the optical unit.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the threshold with depend on a range (distance) as shown by Resman in Blue et al. apparatus and set up a lowest level of threshold value to enable detection of the pointer at a farthest point from the optical unit in order to increase range and reliability of device.

5. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blue et al. and Resman as applied to claim 21 above, and further in view of Marcke (US Patent No. 6,215, 116).

Blue et al. and Resman teach a distance judging device configured to determine a distance between designated device inserted into the predetermined range of the coordinate inputting/detecting area and the optical unit (See Fig. 1, items 10, 20, 22, in description See Col. 6, Lines 42-48); wherein the optical detecting means includes plural optical elements (See Fig. 1, items photodetector, lens, in description See Col. 5, Lines 6-8).

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Blue et al. and Resman do not show the detection signal exceeds the second threshold value when the pointer almost contacts the touch panel and a second threshold unit is determined in accordance with a distance between a point designated by the pointer and optical unit, is set to level enabling the optical device to detect the pointer inserted into a farthest point from optical unit in the coordinate input detecting area.

Marcke teaches that the amplitude for amplified electrical signals and means for increasing the energy levels depend on distance between emitter/receiver an object, and they could be increased or decreased depending on that distance and teaches that power received by the receiver is inversely proportional forth power of the distance between the object and the emitter /receiver (See Col. 1, Lines 44-52).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use this power dependence with a distance which is equivalent to changing threshold value depending on distance (also prescribe the threshold value such that if the designated device is located at a farthest point from the emitter/receiver), as shown by Marcke in Blue et al. and Resman apparatus and set up the first and second thresholds in accordance with distance and calculate first threshold on detection of farthest distance in order to increase range and reliability of device.

6. Claims 27, 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blue et al., Resman as aforementioned to claim 21 above and in view Fumihiko et al. (JP No.09319501 A).

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As to claim 27, Blue et al., Resman do not teach about first and second optical devices each having a light source and a light acceptance unit, wherein the second threshold value is set and used in comparing with detection signals generated by a the first and second optical units.

Fumihiko et al. shows two optical units installed in adjacent corners (See Drawing 1, items 1-3, k1. k2 and Detailed description, 0007).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use first and second optical units, as shown by Fumihiko et al. in Blue et al., Resman and Marcke device to provide a miniaturized high-reliability detector of simple configuration (See Problem to be solved in Fumihiko et al. reference).

As to claim 31, Blue et al. and Resman teach optical units include reflection mirrors each disposed on prescribed sides of the coordinate input-detecting area, reflection mirrors having surfaces whose every portions return light beam to the light source (See Fig. 1, items 10, 12, 16, 18, in description See from Col. 4, Line 55 to Col. 6, Line 32).

Blue et al., and Resman do not show optical units being disposed at corners on the coordinate input detecting area.

Fumihiko et al. teaches optical units being disposed at corners on the coordinate input detecting area (See Drawing 1, items 1-3, k1. k2 and Detailed description, 0007).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use optical units being disposed at corners on the coordinate input detecting area, as shown by Fumihiko et al. in Blue et al. and Resman device to provide a miniaturized high-reliability detector of simple configuration (See Problem to be solved in Fumihiko et al. reference).



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As to claim 35, Blue et al. teaches optical unit further includes a probe light generating device configured to generate and swing and irradiate probe lights toward the reflection mirrors (see fig. 1, items Infrared Laser Diode, 16, 12, in description See from Col. 4, Line 55 to Col. 5, Line 32).

7. Claims 28-30, 32-34, 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blue et al., Resman and Marcke as aforementioned to claims 22-24 above and in view Fumihiko et al.

As to claims 28-30, Blue et al., Resman and Marcke do not teach about first and second optical devices each having a light source and a light acceptance unit, wherein the second threshold value is set and used in comparing with detection signals generated by a the first and second optical units.

Fumihiko et al. shows two optical units installed in adjacent corners (See Drawing 1, items 1-3, k1. k2 and Detailed description, 0007).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use first and second optical units, as shown by Fumihiko et al. in Blue et al., Resman and Marcke device to provide a miniaturized high-reliability detector of simple configuration (See Problem to be solved in Fumihiko et al. reference).

As to claims 32-34, Blue et al., teaches optical units include reflection mirrors each disposed on prescribed sides of the coordinate input-detecting area, reflection mirrors having surfaces whose every portions return light beam to the light source (See Fig. 1, items 10, 12, 16, 18, in description See from Col. 4, Line 55 to Col. 6, Line 32).

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Blue et al., Resman and Marcke do not show optical units being disposed at corners on the coordinate input detecting area.

Fumihiko et al. teaches optical units being disposed at corners on the coordinate input detecting area (See Drawing 1, items 1-3, k1. k2 and Detailed description, 0007).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use optical units being disposed at corners on the coordinate input detecting area, as shown by Fumihiko et al. in Marcke, Resman and Blue et al. device to provide a miniaturized high-reliability detector of simple configuration (See Problem to be solved in Fumihiko et al. reference).

As to claims 36-38, Blue et al. teaches optical unit further includes a probe light generating device configured to generate and swing and irradiate probe lights toward the reflection mirrors (see fig. 1, items Infrared Laser Diode, 16, 12, in description See from Col. 4, Line 55 to Col. 5, Line 32).

### ***Response to Amendment***

8. Applicant's arguments with respect to claims 21-24, 27-38 have been considered but are moot in view of the new ground(s) of rejection.

### ***Telephone inquiry***

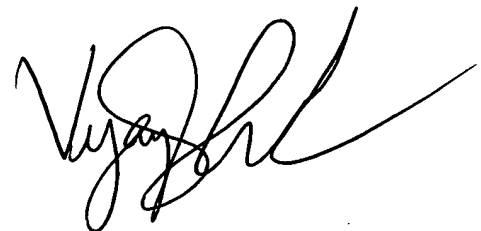
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 703-305-5661. The examiner can normally be reached on 8 a.m. to 5 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ls

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a long horizontal flourish extending to the right.

**VIJAY SHANKAR  
PRIMARY EXAMINER**